SISTERSVILLE SAMPLING PROPOSAL

Sistersville Water Samples

For the initial sampling, the wells will be dipped, both for bailing three times and for samples. A dipping device will be borrowed from South Charleston Plant, if possible. A water sample will be taken from the cased auger hole, but only analyzed if the monitor wells (which are closer to Site 1) are contaminated.

The analysis is two-stage. If Stage 1 points out significant parameter differences between the upstream and downstream well, Stage 2 should begin. Stage 1 has many tests which give results quickly, so enough sample should be obtained for both stages. Stage 2 sample will be kept on ice (4°C).

The piezometric surface should be measured before samples are taken in each well.

Stage 1

Specific Conductance
pH
Temperature
Chloride
Metals
TOC
Color
Torbidity
Magic Compound (Requires 2 ℓ Sample Size)

Stage 2

Total Dissolved Solids (TDS)
Biochemical Oxygen Demand (BOD)
Phenols
Gas Chromatograph-Mass Spectrophotometer (GC-MS)

The size of samples required will be determined by D. T. Marsh and C. F. Schubert. Mr. Schubert will be responsible for obtaining the samples, sample bottles and analyzing samples. Chemron is the outside laboratory to be used. Mr. Schubert is the Plant Coordinator.

SAMPLING ALTERNATIVES

I. Blowing Wells

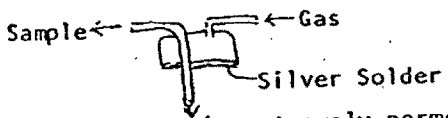
(This method may be used after the first round of sampling.)

Requires three (3) things:
- Cylinder of Nitrogen
- Regulator
- Blow Cap

1) The Cylinder
   - -nitrogen gas should be used, as air will oxidize some compounds.
   - -a standard 5 ft. cylinder contains 254 ft^3 of gas.
   - -3/8" polyethylene instrument tubing may be used to transfer the gas. The cylinder may be in a truck, or a small cylinder could be on the sampler's back.

2) The Regulator
   - -Goff Mountain reduces the pressure from 2000 psi down to 40-75 psi.

3) The Blow Cap



316 or 304 LC Stainless Steel Fittings

If strata is extremely permeable, blowing will not work.

II. Hand Dipping

This method will be used for the initial sampling. It may be necessary to fabricate a dipper.